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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,954	07/10/2003	Hoi-Sing Kwok	016660-164	1065
7590 06/14/2007				
James A. LaBarre		EXAMINER		
BURNS, DOANE, SWECKER & MATHIS, L.L.P.		DUDA, KATHLEEN		
P.O. Box 1404		ART UNIT		
Alexandria, VA 22313-1404		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/615,954	Applicant(s) KWOK ET AL.	
	Examiner Kathleen Duda	Art Unit 1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-31 and 34-41 is/are pending in the application.
- 4a) Of the above claim(s) 39 and 40 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 34 is/are allowed.
- 6) ☒ Claim(s) 20-31, 37, 38 and 41 is/are rejected.
- 7) ☒ Claim(s) 35 and 36 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 20-31 and 34-41 are pending in this application.

Election/Restrictions

2. Claims 39 and 40 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on April 23, 2004.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 20-31, 38 and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by Kunihiro JP 10-333154, English translation from JPO).

Kunihiro discloses a method for orienting lyotropic liquid crystal. The orientation control of the lyotropic liquid crystal containing an isotropic solvent was not known until now [0003]. A photo-active molecule layer is orientated by diagonal irradiation or by irradiation with linear polarized light

[0027]. A lyotropic liquid crystal is brought into contact with the orientated photo-active layer (abstract). Optically activated molecules used for the photo-alignment layer include aromatic azo-compounds [0010]-[0011]. The lyotropic liquid crystal is dissolved in a solvent [0031]. After the light orientation of the photosensitive layer, the LLC layer is heated. The lyotropic liquid crystal may change into an isotropic phase condition [0040]. The example teaches forming the photo-active molecular layer on a glass substrate and exposure using linearly polarized light through a photomask. The example also teaches using multiple liquid crystal solutions with different colors and that the photo-alignment layer is exposed multiple times. The photomask may generate birefringence. Various displays may be formed by combining two or more polarizing plates [0040]-[0049].

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kunihiro.

Kunihiro is silent on the thickness of the absorber film and does not disclose that this layer has a thickness of 0.3 to 1.5 microns. It would within the ordinary skill of one in the art to determine the optimal film thickness of the absorber layer in the method Kunihiro by routine experimentation and to have a thickness of 0.3 to 1.5 microns, if required, because thickness is a result-effective variable, and the discovery of an optimum value of a result effective variable is ordinary within the skill of the art, as taught by *In re Boesch*, (617 F.2d 272, 205 USPQ 215 (CCPA 1980)).

Response to Arguments

7. Applicant's arguments filed April 20, 2007 with respect to Kunihiro have been fully considered but they are not persuasive. Applicant argues that Kunihiro does not suggest the use of photochemically stable azodye as recited in claim 20 and that a molecular change is occurring. To be photochemically stable, a compound must not undergo a chemical reaction when exposed to light. In the case of Kunihiro, the orientation of the molecules is changed (and can be reversed) but a chemical reaction is not occurring since the orientation can be reversed to the original state. It is a change in state not in the chemical composition.

Allowable Subject Matter

8. Claims 35 and 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claim 34 is allowed.

Conclusion


10. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication should be directed to Examiner K. Duda at (571) 272-1383. Official FAX communications should be sent to (571) 273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff, can be reached at 571-272-1385.

Information regarding the status of an application may be obtained from the Patent Application Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Kathleen Duda
Primary Examiner
Art Unit 1756